

What is claimed is:

1. A head-mounted display, provided in a housing of a predetermined shape, for displaying an image to a user, the head-mounted display comprising:

at least one image-forming unit that produces and emits an image;

a half mirror disposed obliquely with respect to the image-forming units for reflecting some part of the image incident from the image-forming units and transmitting the remaining part;

a pinhole located at a focal point of the image reflected from the half mirror for transmitting the incident image and focusing the transmitted image onto a dark space within the housing;

a collimating lens disposed opposite the half mirror for converging the incident divergent image and producing a parallel image;

a prism unit disposed opposite the collimating lens for guiding the path of the incident image; and

a Fresnel lens disposed opposite a part of the prism unit for focusing the incident image onto an eyeball of the user,

wherein the image formed in the housing through the pinhole is viewed by the user.

2. The head-mounted display of claim 1, wherein the Fresnel lens has a Fresnel pattern corresponding to an aspheric shape to correct chromatic aberration.

3. The head-mounted display of claim 1, wherein the prism unit is constructed so that the incident image undergoes reflection at least three times.

4. The head-mounted display of claim 1, wherein the prism unit comprises:  
a first prism comprising a first entrance face disposed opposite the collimating lens, a first reflection face through which the image entering through the first entrance face is reflected, and a first exit face through which the image reflected from the first reflection face exits; and

a second prism comprising a second entrance face disposed opposite the first exit face, a second reflection face through which the incident image is reflected, and an exit reflection face where the image entering from the second entrance face is reflected onto the second reflection face while the image incident from the second reflection face exits toward the Fresnel lens.

5. The head-mounted display of claim 1, wherein the collimating lens is aspheric.

6. The head-mounted display of claim 1, wherein the collimating lens comprises methacrylic resin.

7. The head-mounted display of claim 1, further comprising a condensing lens disposed in an optical path between the image-forming unit and half mirror for converging the

image incident from the image-forming unit.

8. The head-mounted display of claim 7, wherein the condensing lens is aspheric.

9. The head-mounted display of claim 7, wherein the condensing lens comprises methacrylic resin.

10. The head-mounted display of claim 1, wherein the image-forming unit comprises:

a planar backlight that produces and emits planar light; and

a transmissive liquid crystal display placed in front of the planar backlight for selectively transmitting the incident light on a pixel-by-pixel basis and forming an image.

11. The head-mounted display of claim 1, wherein the image-forming unit is a self-emitting display device that selectively emits light on a pixel-by-pixel basis and forms an image.